

Applicant : Roderick J. Scott  
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Attorney's Docket No.: 11696-067001 / PM32757

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-19 (Cancelled).

20. (Currently Amended) A method ~~as claimed in claim 18 wherein reduction in nucleic acid methylation is achieved by down-regulation of one or more methylating enzymes present in the plant~~ for the production of modified endosperm, which comprises the step of introducing a nucleic acid molecule into a plant, the nucleic acid molecule comprising one or more regulatory sequences directing expression in female germ line cells and a sequence whose transcription product reduces the degree of DNA methylation of nucleic acid in the plant by down-regulating one or more DNA methylating enzymes present in the plant.

21. (Currently Amended) A method as claimed in claim 20 wherein the ~~nucleic acid molecule includes a sequence encoding an antisense nucleic acid molecule, a full or partial copy of a methylating enzyme gene already present in the plant or sequence, or a sequence encoding a ribozyme~~ transcription product comprises an antisense nucleic acid.

22. (Currently Amended) A method as claimed in claim 21 wherein the ~~nucleic acid molecule includes the sequence of the Met1 as "gene"~~ transcription product comprises an antisense nucleic acid to Met1.

23-39 (Cancelled).

40. (New) A method as claimed in claim 21, wherein the transcription product comprises an antisense nucleic acid to a *Z. mays* sequence orthologous to Met1.

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41. (New) A method as claimed in claim 21, wherein the transcription product comprises an antisense nucleic acid to a *B. napus* sequence orthologous to Met1.

42. (New) A method as claimed in claim 20, wherein the plant is a dicotyledonous plant.

43. (New) A method as claimed in claim 20, wherein the transcription product down-regulates one DNA methylating enzyme.

44. (New) A method as claimed in claim 20, wherein the transcription product comprises a full or partial sense copy of a DNA methylating enzyme gene already present in the plant.

45. (New) A method as claimed in claim 44, wherein the sense copy is a partial sense copy.

46. (New) A method as claimed in claim 44, wherein the DNA methylating enzyme is Met1.

47. (New) A method as claimed in claim 44, wherein the DNA methylating enzyme is a *Z. mays* enzyme orthologous to Met1.

48. (New) A method as claimed in claim 44, wherein the DNA methylating enzyme is a *B. napus* enzyme orthologous to Met1.

49. (New) A method as claimed in claim 44, wherein the plant is a dicotyledonous plant.

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50.(New) A method as claimed in claim 20, wherein the transcription product comprises a ribozyme sequence.

51.(New) A method as claimed in claim 50, wherein the transcription product comprises a ribozyme.

52.(New) A method as claimed in claim 50, wherein the transcription product comprises a ribozyme to a *Z. mays* sequence orthologous to Met1.

53.(New) A method as claimed in claim 50, wherein the transcription product comprises a ribozyme to a *B. napus* sequence orthologous to Met1.

54.(New) A method as claimed in claim 50, wherein the plant is a dicotyledonous plant.

55. (New) A method as claimed in claim 20, wherein the one or more regulatory sequences direct expression in female gametic cells.

56. (New) A method as claimed in claim 55, wherein the transcription product comprises an antisense nucleic acid.

57. (New) A method as claimed in claim 56, wherein the transcription product comprises an antisense nucleic acid to Met1.

58. (New) A method as claimed in claim 55, wherein the transcription product comprises a partial sense copy of a DNA methylating enzyme already in the plant.

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59. (New) A method as claimed in claim 55, wherein the plant is a dicotyledonous plant.

60. (New) A method as claimed in claim 55, wherein the plant is a monocotyledonous plant.